Early Action Statement of Work Key Terms

EPA Discussion Draft – October ~~1124~~, 2018

Administrative Order on Consent (AOC) (Order #1)

- A new AOC (Order #1), resulting in a Record of Decision, will be the vehicle for performing the Focused Feasibility Study (FFS); and that Order will specify the scope of the FFS and the key points captured herein, including the criteria for defining the remedy footprint that will be the subject of the FFS evaluation. The FFS will be the basis for a Record of Decision for the ~~performance of an~~preferred remedial alternative for the Early Action at Creek Miles 0 – 2 (CM 0 – 2) and subsequent monitoring. A separate administrative vehicle (Order #2) will be used for final remedial design and implementation.
- Key components of Order # 1 that will be implemented during its execution include:
  - Pre-FFS characterization to define remedy footprint, including Work Plan and supporting documents, schedule permitting
  - Performance monitoring plan and criteria to determine short-term and long-term success
  - Focused Feasibility Study

Criteria for Defining Remedy Footprint (Defined in Order #1)

- ~~Early Action focuses on surface sediment (0 to 15 cm) "Target Areas" within CM 0 to 2 where surface sediment chemical concentrations exceed the upper tolerance limit (UTL 95/95) statistical range of Remedial Action Levels (RALs) derived from the data from the five existing EPA-approved background reference areas~~
- ~~The five reference areas are inclusive of the areas that comprise the combined sewer overflow (CSO)/industrial and East River categories (Westchester Creek, Brooklyn Navy Yard, Flushing Creek, Coney Island Creek, and Steinway Creek)~~
- Early Action will remove surface sediment from these "Target Areas" with the goal of reducing the average surface ~~concentration~~ concentrations of PCB's, TPAH's, and copper throughout ~~Creek Miles~~CM 0 – 2 to concentrations similar to background reference area concentrations
- The ~~UTL 95/95 values are derived from existing chemical concentrations~~ range of ~~surface sediment~~ Remedial Action Levels (RALs) based on analysis of the data ~~in~~from the ~~five~~ EPA-approved reference areas are
  - ~~The UTL 95/95 values provide a~~PCBs > 1.2 to 1.4 ppm
  - TPAHs > 65 to 85 ppm
  - Copper > 400 to 500 ppm
- These ranges of concentrations are consistent with the upper end of the range of relevant urban background ~~characterization that is reflective of~~concentrations in the EPA-approved reference areas. The remediation of sediments that exceed that range will result in average conditions in CM 0 – 2 that will be trending towards long-term conditions sustainable in Newtown Creek post-remedy implementation.
- ~~The Remedial Action Levels (RALs) based on UTL 95/95 UTL for the five reference areas are:~~
  - ~~PCBs > 1.38 ppm~~
  - ~~TPAHs > 76.6 ppm~~

- ~~Copper > 423 ppm~~

- ~~Set~~ A final single RAL for each of these compounds that falls within the ranges identified above will be established in the FFS
- The initial remedy area footprint will be set consistent with Target Areas that exhibit surface sediment (0 to 15 cm) that exceed the range of RALs~~/background reference values~~ defined above
- ~~Refine the~~ The initial 12 to 24 Target Areas (based on the range of RALs above) will be refined using a pre-FFS sampling investigation for evaluation in the FFS

Performance Monitoring (Defined in Order #1)

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- Use short-term (1 to 5 years) metrics that focus on remedy implementation success and confirmation of the Conceptual Site Model (using bathymetry, SPI, and sediment traps)
- Use long-term (5+ years) metrics that focus on surface chemistry comparisons that take into account long-term conditions sustainable in Newtown Creek. The surface-weighted average concentration (SWAC) for CM 0 – 2 will be compared to a range of relevant urban background ~~SWACS~~SWACs as represented by the ~~same~~ five background reference areas used to establish the RALs, and a new 6th reference area near the mouth of Newtown Creek
- The six background reference areas are Westchester Creek, Flushing Creek, Brooklyn Navy Yard, Coney Island Creek, Steinway Creek, and a new area to be established in the East River at the mouth of Newtown Creek (new station needs confirmation that physical characteristics (e.g., grain size and TOC are similar to surface sediment in CM 0-2)
    - Use a spatially-weighted surface chemistry averaging approach to establish a range of reference area SWACs and compare those to the post-remedy SWAC in 0 – 2
- For ~~all~~the three chemical constituents ~~use trend analyses to confirm SWAC concentrations in CM 0 – 2 are at or trending towards~~, demonstrate that over time the SWAC ~~concentrations~~ in CM 0-2 is within the ~~aforementioned~~range of SWACs calculated from the background reference areas

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Focused Feasibility Study (Order #1)

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- The FFS will evaluate remedial alternatives confined to the areal extent of surface contamination defined during the pre-FFS sampling (included as part of Order #1)
- All alternatives (other than a No Action alternative) will consist of dredging at least the top 2-feet of sediment from the surface areas that exceed the RAL values described above

Permutations that will define the alternatives evaluated will consider different depths of removal (2 - feet and greater) and different backfill cover materials (e.g., clean sand and cover amended with organic carbon). Factors that will be considered to establish alternative remedy depths are site-specific conditions at the individual removal locations ~~(e.g., depth to native, concentration gradients within the vertical profile, and vessel activity).~~

Order #2 – Remedial Design and Construction

- Remedial design will be completed under a remedy-specific Order
- Order #2 may include a pre-design investigation step that will provide information to ~~refine volumes~~support design associated with the preferred alternative selected in the ROD for the FFS CM 0 – 2

- Remedy implementation will be completed under Order #2 after the completion and approval of remedial design., which will include final volumes to be remediated